

## Complete Summary

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### TITLE

Diabetes mellitus: percent of patients with diabetes mellitus having hemoglobin A1c (HgbA1c) greater than 9 or not done (NEXUS clinics cohort).

### SOURCE(S)

Office of Quality and Performance (10Q). FY 2005 VHA executive career field network director performance measurement system and JCAHO hospital core measures. Technical manual. Washington (DC): Veterans Health Administration (VHA); 2005 Mar 9. 244 p.

## Brief Abstract

### DESCRIPTION

This measure assesses the percent of patients with diabetes mellitus having hemoglobin A1c (HgbA1c) greater than 9 or not done in the past 12 months.

### RATIONALE

Research studies in the United States and abroad have found that improved glycemic control benefits people with either type 1 or type 2 diabetes. In general, for every 1% reduction in A1c, the relative risk of developing microvascular diabetic complications (eye, kidney, and nerve disease) is reduced by 40%.

### PRIMARY CLINICAL COMPONENT

Diabetes mellitus; glycemic control; glycosylated hemoglobin (HgbA1c)

### DENOMINATOR DESCRIPTION

Diabetic patients from the NEXUS Clinics cohort in sample, including those who have not had a hemoglobin A1c (HgbA1c) done in the past 12 months (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

### NUMERATOR DESCRIPTION

The number of patients from the denominator having hemoglobin A1c (HgbA1c) greater than 9 or not done

## Evidence Supporting the Measure

### PRIMARY MEASURE DOMAIN

Outcome

### SECONDARY MEASURE DOMAIN

Process

### EVIDENCE SUPPORTING THE MEASURE

A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence

### NATIONAL GUIDELINE CLEARINGHOUSE LINK

- [VA/DoD clinical practice guideline for the management of diabetes mellitus.](#)

## Evidence Supporting Need for the Measure

### NEED FOR THE MEASURE

Use of this measure to improve performance  
Wide variation in quality for the performance measured

### EVIDENCE SUPPORTING NEED FOR THE MEASURE

Office of Quality and Performance (10Q). FY 2005 VHA executive career field network director performance measurement system and JCAHO hospital core measures. Technical manual. Washington (DC): Veterans Health Administration (VHA); 2005 Mar 9. 244 p.

## State of Use of the Measure

### STATE OF USE

Current routine use

### CURRENT USE

External oversight/Veterans Health Administration  
Internal quality improvement

## Application of Measure in its Current Use

### CARE SETTING

Ambulatory Care

#### PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Advanced Practice Nurses  
Physician Assistants  
Physicians

#### LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Single Health Care Delivery Organizations

#### TARGET POPULATION AGE

Unspecified

#### TARGET POPULATION GENDER

Either male or female

#### STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

### Characteristics of the Primary Clinical Component

#### INCIDENCE/PREVALENCE

Percent of the population with diabetes:

- Nearly 20.1% of the United States population, or 7.0 million people age 65 and older
- Approximately 2.8 million or 13% of all African Americans
- Two million or 10.2% of all Latino Americans
- Approximately 7.8 million or 8.3% of all men over the age 20 in the United States
- Approximately 9.1 million or 8.9% of all women over the age of 20 in the United States

#### EVIDENCE FOR INCIDENCE/PREVALENCE

Office of Quality and Performance (10Q). FY 2005 VHA executive career field network director performance measurement system and JCAHO hospital core measures. Technical manual. Washington (DC): Veterans Health Administration (VHA); 2005 Mar 9. 244 p.

#### ASSOCIATION WITH VULNERABLE POPULATIONS

See "Incidence/Prevalence" field.

## BURDEN OF ILLNESS

Complications of diabetes include:

### Heart disease

- Heart disease is the leading cause of diabetes-related deaths. Adults with diabetes have heart disease death rates about 2 to 4 times higher than adults without diabetes.

### Stroke

- The risk of stroke is 2 to 4 times higher among people with diabetes.

### High blood pressure

- About 73% of adults with diabetes have blood pressure greater than or equal to 130/80 millimeters of mercury (mm Hg) or use prescription medications for hypertension.

### Blindness

- Diabetes is the leading cause of new cases of blindness among adults 20-74 years old.
- Diabetic retinopathy causes from 12,000 to 24,000 new cases of blindness each year.

### Kidney disease

- Diabetes is the leading cause of treated end-stage renal disease, accounting for 43% of new cases.
- In 1999, 38,160 people with diabetes began treatment for end-stage renal disease.
- In 1999, a total of 114,478 people with diabetes underwent dialysis or kidney transplantation.

### Nervous system disease

- About 60% to 70% of people with diabetes have mild to severe forms of nervous system damage. The results of such damage include impaired sensation or pain in the feet or hands, slowed digestion of food in the stomach, carpal tunnel syndrome, and other nerve problems.
- Severe forms of diabetic nerve disease are a major contributing cause of lower-extremity amputations.

### Amputations

- More than 60% of nontraumatic lower-limb amputations in the United States occur among people with diabetes.
- From 1997 to 1999, about 82,000 nontraumatic lower-limb amputations were performed each year among people with diabetes.

## EVIDENCE FOR BURDEN OF ILLNESS

Office of Quality and Performance (10Q). FY 2005 VHA executive career field network director performance measurement system and JCAHO hospital core measures. Technical manual. Washington (DC): Veterans Health Administration (VHA); 2005 Mar 9. 244 p.

## UTILIZATION

Unspecified

## COSTS

Unspecified

## Institute of Medicine National Healthcare Quality Report Categories

## IOM CARE NEED

Living with Illness

## IOM DOMAIN

Effectiveness

## Data Collection for the Measure

## CASE FINDING

Users of care only

## DESCRIPTION OF CASE FINDING

Diabetic patients from the NEXUS Clinics cohort\*

\*Refer to the original measure documentation for patient cohort description.

## DENOMINATOR SAMPLING FRAME

Patients associated with provider

## DENOMINATOR (INDEX) EVENT

Clinical Condition  
Encounter

## DENOMINATOR INCLUSIONS/EXCLUSIONS

#### Inclusions

Diabetic patients from the NEXUS Clinics cohort in sample, including those who have not had a hemoglobin A1c (HgbA1c) done in the past 12 months\*

\*Eligible Diabetes Mellitus Patients: Meets NEXUS Clinics cohort selection criteria AND has a diagnosis of diabetes upon Computerized Patient Record System (CPRS) chart review. Refer to the original measure documentation for patient cohort description and sampling size strategy.

#### Exclusions

Unspecified

### NUMERATOR INCLUSIONS/EXCLUSIONS

#### Inclusions

The number of patients from the denominator having hemoglobin A1c (HgbA1c) greater than 9 or not done\*

\*HgbA1c: glycosylated hemoglobin used to measure long-range glycemic control. If more than one HgbA1c has been done in the past 12 months, the value of the most recent test is used.

The question pertaining to level of glycemic control pertains to ALL diabetic patients, not just those who have had the test done. Therefore, if no HgbA1c was done, the patient is included in the denominator for both indicators and the numerator for assumed to be out of control (e.g., greater than 9).

#### Exclusions

Unspecified

### DENOMINATOR TIME WINDOW

Time window precedes index event

### NUMERATOR TIME WINDOW

Fixed time period

### DATA SOURCE

Administrative and medical records data

### LEVEL OF DETERMINATION OF QUALITY

Individual Case

### OUTCOME TYPE

Clinical Outcome

### PRE-EXISTING INSTRUMENT USED

Unspecified

## Computation of the Measure

### SCORING

Rate

### INTERPRETATION OF SCORE

Better quality is associated with a lower score

### ALLOWANCE FOR PATIENT FACTORS

Unspecified

### STANDARD OF COMPARISON

Internal time comparison  
Prescriptive standard

### PRESCRIPTIVE STANDARD

Fiscal year (FY) 2005 targets for hemoglobin A1c (HgbA1c) (NEXUS Clinics):

- Facility Floor: 24%
- Meets Target: 15%
- Exceeds Target: 12%

### EVIDENCE FOR PRESCRIPTIVE STANDARD

Office of Quality and Performance (10Q). FY 2005 VHA executive career field network director performance measurement system and JCAHO hospital core measures. Technical manual. Washington (DC): Veterans Health Administration (VHA); 2005 Mar 9. 244 p.

## Evaluation of Measure Properties

### EXTENT OF MEASURE TESTING

Unspecified

## Identifying Information

### ORIGINAL TITLE

Diabetes mellitus: HgbA1c greater than 9 or not done (poor control).

### MEASURE COLLECTION

Fiscal Year (FY) 2005: Veterans Health Administration (VHA) Performance Measurement System

MEASURE SET NAME

Diabetes Mellitus

DEVELOPER

Veterans Health Administration

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2001 Nov

REVISION DATE

2005 Mar

MEASURE STATUS

This is the current release of the measure.

This measure updates a previous version: Office of Quality and Performance (10Q). FY2002 VHA performance measurement system. Technical Manual. CPG-DM: glycemic control (hemoglobin A1C greater than 11.0 or not done). Washington (DC): Veterans Health Administration (VHA); 2002 Mar 8.

SOURCE(S)

Office of Quality and Performance (10Q). FY 2005 VHA executive career field network director performance measurement system and JCAHO hospital core measures. Technical manual. Washington (DC): Veterans Health Administration (VHA); 2005 Mar 9. 244 p.

MEASURE AVAILABILITY

The individual measure, "Diabetes Mellitus: HgbA1c Greater Than 9 or Not Done (Poor Control)," is published in "FY 2005 VHA Performance Measurement System: Technical Manual."

For more information contact:

Department of Veterans Affairs  
Office of Quality and Performance (10Q)  
ATTN: Roxane Rusch, E-mail: [roxane.rusch@va.gov](mailto:roxane.rusch@va.gov) or



Bonny Collins, E-mail: [bonny.collins@va.gov](mailto:bonny.collins@va.gov) or  
Lynnette Nilan, E-mail: [lynnette.nilan@va.gov](mailto:lynnette.nilan@va.gov)

#### NQMC STATUS

This NQMC summary was completed by ECRI on September 27, 2002. The information was verified by the Veterans Health Administration on October 29, 2002. This NQMC summary was updated by ECRI on November 9, 2004. The information was verified by the measure developer on December 10, 2004.

#### COPYRIGHT STATEMENT

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Date Modified: 4/18/2005

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